

IN THE DRAWINGS:

Applicants' attorney thanks the Examiner for the careful review of the specification and the drawings. Almost every amendment suggested by the Examiner has been made, either to the specification or the drawings.

Fig. 1 has been amended to substitute a "B" for the "D" that was previously in queue 111.

Element number 260 has been deleted from Fig. 2.

Element numbers 325 and 330 have been deleted from Fig. 3.

The specification has been amended to include references to element numbers 440 and 610, so Figs. 4 and 6 were not amended.

Element numbers 753, 755, 757, 759, 772 and 774 have been deleted from Fig. 7.

However, Fig. 1 has not been amended to indicate "Prior Art" because the device indicated in Fig. 1 is not necessarily a prior art device. The situation depicted in Fig. 1 could be addressed in different ways, e.g., according to whether or not the present invention is applied. With a prior art device, there could be a head of line blocking problem, as described. However, if a device were configured according to some implementations of the invention, there would not be a head of line blocking problem.

Replacement drawings for Figs. 1, 2, 3 and 7 are being provided with this Amendment.

REMARKS

Claims 1-33 are pending in this application. Claims 4, 7-10, 14, 17-21, 23-28, 30, 31 and 33 were rejected under 35 USC § 112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-29 and 31-32 were rejected under USC § 102(a) as being allegedly anticipated by U.S. Patent Publication No. 2003/0076849 (“Morgan”). Claim 30 was rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Morgan in view of U.S. Patent Publication No. 2003/0126223 (“Jenne”). These rejections are respectfully traversed. However, claims 1, 4, 7-11, 14, 17-19, 21-23, 26-31 and 33 have been amended to address the rejections under 35 USC § 112, second paragraph and to more clearly distinguish the claimed invention from the art relied upon in the Office Action. No new matter has been added. It is respectfully submitted that all claims are in condition for allowance in view of the amendments and remarks set forth herein.

Amendments to the Specification

Paragraphs 1 through 4 of the Office Action indicated several objections to the drawings. Many of these objections were addressed by making amendments to the drawings, as noted above. However, the specification has been amended to add reference numbers 440, 610, 769 and 770. (See Office Action at ¶ 3.) Moreover, the specification has been amended to distinguish CPU 762 from memory 761. (See Office Action at ¶ 4.) It is respectfully submitted that the amended drawings and specification, along with the foregoing discussion, address the objections raised in the Office Action. Applicants’ attorney greatly appreciates the Examiner’s careful review of the specification and drawings.

Claim Rejections - 35 USC § 112, ¶ 2

All of the § 112 rejections have been addressed via claim amendments. For example, many claims have been amended to recite a “previously-allocated queue,” in order to distinguish a queue that may be allocated if there is no previously-allocated queue for a classification. Antecedent basis issues have also been resolved via amendment.

Claim Rejections - 35 USC §§ 102 and 103

Claim 1 has been amended to recite “making a classification for an incoming packet, the classification comprising at least one of an egress port number or an ingress port number . . .” All of the independent claims have been amended in a similar fashion. For example, the network device of claim 11 has been amended to recite “means for making a classification for an incoming packet, the classification comprising at least one of an egress port number or an ingress port number.” The computer program of claim 22 is configured to control a network device for “making a classification for an incoming packet, the classification comprising at least one of an egress port number or an ingress port number.” The network device of claim 23 now recites “a classification engine for making a classification[[s]] for the incoming packet[[s]], the classification comprising at least one of an egress port number or an ingress port number.” The method of claim 26 now recites “making a first classification for the first packet, the first classification comprising at least one of a first egress port number or a first ingress port number.” (Claim 29 was an independent claim, but has now been amended to depend from claim 1.)

As recited in amended claims 7 and 17, the classification may also comprise a priority number.

Support for such recitations may be found, e.g., in the Summary of the Invention section:

According to some implementations, incoming packets are classified according to a queue in which the packet (or classification information for the packet) will be stored, e.g., according to a “Q” value. For example, a Q value may be a Q number defined as {Egress port number || Priority number|| Ingress port number}.

(Specification at p. 4, lines 4-9.)

As understood, the art relied upon does not teach, suggest or indicate the claimed classification method or apparatus. Morgan, as understood, does not classify packets according to an egress port number or an ingress port number. Instead, Morgan (as understood) tries to maximize flow-through by focusing on the priority of packets. Morgan tries to insure that packets with the highest priority get through first. Morgan does this by creating queues that reflect different priority categories and then reallocating resources, where necessary, to insure

that queues for higher priority packets get precedence over those for lower priority in terms of resource allocation.

Moreover, claims 2, 5, 12 and 15 recite a queue “associated with an ingress port.” Applicants’ attorney has found no mention in Morgan of queues being associated with ingress ports. In Morgan, Applicants’ attorney has found only references to queues being associated with a destination port, or not being associated with any port at all.

In addition, claims 3 and 13 recite “the queue is a virtual output queue.” In Morgan, the queues do not appear to take the form of virtual output queues.

Claims 10 and 20 recite a free list that indicates queues available for allocation. Applicants’ attorney has found no such feature in Morgan.

It is respectfully submitted that the rejection of claim 30 (as allegedly obvious over Morgan in view of Jenne) has been overcome by amending claim 1 and making claims 29 and 30 depend from claim 1.

CONCLUSION

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

The Commissioner is hereby authorized to charge any additional fees, including any extension fees, which may be required or credit any overpayment directly to the account of the undersigned, No. 50-0388 (Order No. ANDIP035).

Respectfully submitted,
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